United States
Environmental Protection
Agency

EPA Proposes Cleanup Plan for PCB Contamination

Little Mississinewa River Site
Randolph County, Indiana February 2004

Public comment period

EPA will accept written comments on its proposed cleanup plan during a 30-day public comment period from Feb. 9 to March 9, 2004. This fact sheet includes a pre-addressed comment form.

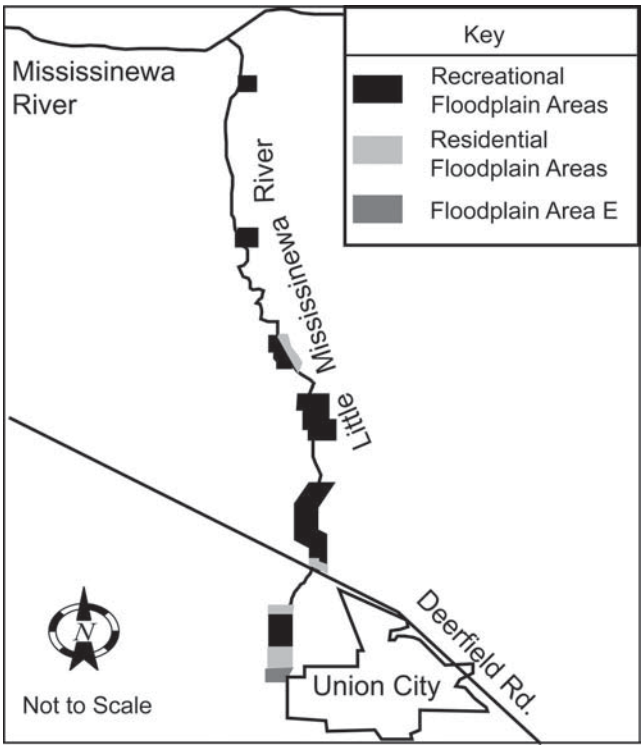
Public meeting

EPA will hold a public meeting to explain and answer questions about its recommended cleanup plan. We will also accept oral and written comments at the meeting.

Date: Feb. 19, 2004
Time: 7 p.m.
Place: New Lisbon Christian Church
7996 E. 550 North
Union City, Ind.

If you need special accommodations in order to attend this meeting, please contact Joe Muñoz at least one week prior to the meeting toll free at: (800) 621-8431, weekdays 10 a.m. - 5:30 p.m.

This map of the Little Mississinewa River shows the different types of floodplain areas contaminated with PCBs. The EPA cleanup plan proposes various procedures for each type of floodplain.



U.S. Environmental Protection Agency is proposing removing PCB-contaminated sediment (river mud) and soil to clean up the contamination in the Little Mississinewa River and floodplain.[1] PCB contamination has been detected in fish in the river since 1984 and in 1990 a government advisory recommended that people should not eat fish caught in the river. PCBs, or polychlorinated biphenyls, are toxic chemicals formerly used in electrical and hydraulic equipment and also found in used motor oil. PCBs are banned from use but are very stable and stay in the environment for many years. People and wildlife could potentially be exposed to the PCBs through indirect contact with floodplain soil through farming, fishing and hunting; direct contact with floodplain soil; direct contact with river sediment; direct contact with contaminated plants or fish; and by people, animals or birds eating contaminated fish.

EPA's proposed cleanup plan was one of 10 options considered by the Agency. The selected proposal was determined to protect human health and the environment in the most cost-effective manner. Area residents have 30 days to comment on EPA's proposed plan. See the adjacent box to find out how your opinion can be heard. Based on your feedback, EPA may modify the selected cleanup plan or pick another option.

[1]*Section 117(a) of the Comprehensive Environmental Response, Compensation, and Liability Act requires publication of a notice describing the proposed cleanup plan. Information supporting the decision, such as the remedial investigation/feasibility study, must also be made available to the public for comment. This fact sheet is a summary of information contained in the RI/FS for the Little Mississinewa River site. Please consult that document, which can be found at the Union City Public Library, for more detailed information.*

A study was done to find out the potential health risks PCB exposure poses to people. The study estimated the number of cancer cases that could arise over and above the usual number of cases expected in this part of Indiana. EPA determined the increased risk of getting cancer from exposure to PCBs was as high as two potential additional cases of cancer for every 100,000 people who are exposed to the mud and soil in the residential floodplain areas. Long-term exposure to PCBs in portions of the river and floodplain also poses other non-cancer health risks to people, plants and animals. Because EPA considers this amount of risk unacceptable, the Agency is requiring that the river and floodplain be cleaned up. Over 3,000 samples have been taken to find out how much contamination there is in the river and floodplain and how best to clean it up.

Cleanup choices evaluated

EPA considered cleanup choices for addressing PCB-contaminated sediment and soil. Through a complex screening process described in the feasibility study, 10 cleanup options were selected for further evaluation:

1. No action

This choice means that no cleanup actions would be taken. The PCB-contaminated sediment and soil would be left in place in the river and floodplain without any cleanup remedy. The no-action option is required by law to provide a baseline against which other cleanup choices can be evaluated. The cost listed below is for monitoring sections of the river and for a required five-year review of the cleanup.

Cost: $305,000

EPA's recommended cleanup plan

EPA evaluated 10 cleanup options against the nine criteria described on Page 7. As a result of this evaluation, EPA's proposed choice is 3f with the exception that the cleanup level for the recreational area would be 20 ppm as described in option 3g.

River sediment removal to an average PCB level of 1 ppm at the surface and 5 ppm below 1 foot deep; residential floodplain soil removal to an average PCB level of 1.3 ppm overall; and recreational soil removal to a PCB level of 20 ppm.

This choice includes digging and removing contaminated material. Soil and sediment dug up would be disposed of at an EPA-approved landfill off-site. EPA considers this choice as protective of human health and the environment in a cost-effective manner. The recommended cleanup choice is described below. Consult the feasibility study report for a detailed description of the selected choice as well as the other cleanup options.

Sediment

Contaminated river sediment would be dug up and removed to a depth up to 12 inches until the average remaining level of PCBs is 1 ppm. Additional digging and removing sediment would go deeper than 12 inches where contamination is above 5 ppm. This additional effort would decrease the opportunity for contamination to wash downstream with the flow of the river. It is expected that digging would not go beyond 3 to 6 inches into the clay layer or a maximum depth of 3 feet below the river bed (whichever comes first).

After the digging and removing of the contaminated sediment is completed, sampling would be done to determine the need for a physical barrier. The barrier would improve the long-term effectiveness of the cleanup action and reduce future movement of any remaining contamination. The barrier would be placed where PCB concentrations are greater than 5 ppm at depths greater than 3 feet below the river bed.

Note: Levels of PCBs are expressed in parts per million. PPM is a measure of concentration of a chemical in a sample, such as soil, sediment or water.

Recreational Areas

Contaminated soil in recreational areas with PCB levels above 20 ppm would be dug up and removed down to 2 feet deep in open areas and 1 foot in heavily vegetated areas. The 1-foot depth in heavily vegetated areas is intended to protect and decrease the destruction of the floodplain woods and vegetation from digging. After the digging and removing of the contaminated soil, sampling would be done to determine the need for a physical barrier.

Residential Areas

Contaminated soil in residential areas would be dug up and removed to a depth of up to 1 foot until the average remaining level of PCBs is 1.2 ppm in river-edge areas or 1.3 ppm overall. Sampling would also be done to determine the need for a physical barrier. In open areas, digging would extend an additional 1 foot where needed. Post-digging sampling would be done at the 2-foot depth to determine the need for a physical barrier.

Monitoring and Maintenance

Monitoring and maintenance of the cleanup choice and complying with existing or new land-use controls would be followed to ensure the long-term effectiveness of this cleanup action. Monitoring and maintenance details would be developed during the cleanup design phase.

Cost: $27 million

2. Engineered covers/caps with land-use controls
This choice involves covering contaminated soil with clean soil in selected portions of the river and floodplain. This action would prevent PCBs from moving to another location and direct contact of PCBs with humans and wildlife. Some soil and sediment would be dug up to install the cover and maintain adequate drainage away from the PCBs. Soil and sediment dug up would be disposed of at an EPA-approved landfill off-site. Land-use controls would reduce the chance of future disturbance of the cover and PCBs.

Cost: $18.4 million

3a. Source removal to a site-specific risk level with potential physical barrier and geotextile fabric
This choice includes digging and removing contaminated material. Soil and sediment dug up would be disposed of at an EPA-approved landfill off-site. In this option, contaminated soil and sediment would be dug up until the average remaining amount of PCBs left is a certain level. The average amount of PCBs that would be left in each area is:

- 1 ppm in river sediment
- 1.2 ppm in residential soil at river-edge areas
- 1.3 ppm in overall residential soil areas
- 13.5 ppm in recreational soil areas

This choice also includes 14 sub-options that evaluate removing contaminated soil and sediment to various depths ranging from 12 to 24 inches in the three areas. This choice includes putting in a barrier that would prevent the erosion of flowing water in rivers that removes and carries away sediment from the bed and banks. This choice would place a lining or barrier before backfilling excavated residential and recreational areas to prevent soil erosion. Existing land-use controls would be continued to reduce the chance of future disturbance of the cover and PCBs.

Cost: $16.7 million to $22.8 million

3b. Contaminated sediment and soil removal to 1 ppm with potential physical barrier and/or geotextile fabric
This choice includes digging and removing contaminated material. Soil and sediment dug up would be disposed of at an EPA-approved landfill off-site. Unlike option 3a, this choice involves removing all PCB-contaminated soil and sediment above 1 ppm. This choice also includes six sub-options that evaluate removing contaminated soil and sediment to various depths ranging from 2 to 3 feet. This choice also includes putting in a barrier that would prevent the erosion of flowing river water that removes and carries away sediment from the bed and banks. This option also places a lining or barrier before backfilling excavated residential and recreational areas to prevent soil erosion. Existing land-use controls would be continued to reduce the chance of future disturbance of the cover and PCBs.

Cost: $54.5 million to $62.9 million

3c. Contaminated sediment and soil removal to 5 ppm with potential physical barrier and geotextile fabric
This choice is like 3b except that all PCB-contaminated soil and sediment at levels above 5 ppm would be dug up.

Cost: $34.1 million to $38.3 million

3d. Contaminated sediment removal to 1 ppm and soil removal to 10 ppm with potential for physical barrier and/or geotextile fabric
This choice is like 3b and c except that all PCB-contaminated sediment at levels above 1 ppm would be dug up and all PCB-contaminated soil at levels above 10 ppm would be dug up.

Cost: $34.5 million to $36.4 million

3e. Contaminated sediment removal to 5 ppm and soil removal to 50 ppm with potential for physical barrier and/or geotextile fabric
This choice is like 3b, c and d except that all PCB-contaminated sediment at levels above 5 ppm would be dug up and all PCB-contaminated soil at levels above 50 ppm would be dug up.

Cost: $21 million to $22.2 million

3f. River sediment removal to an average PCB level of 1 ppm at the surface and 5 ppm below 1 foot deep; residential floodplain soil removal to an average PCB level of 1.3 ppm overall; and recreational soil removal to a PCB level of 10 ppm.

This is EPA's preferred option. *See page 2 for a complete explanation.*

Cost: $31 million

All of the choices except no-action include monitored natural recovery for sediment in the northern half of the river. Natural recovery means natural processes in the earth such as dilution or dispersion would be allowed to break up the contamination. The natural processes would be monitored to make sure that they are working. There would also be sampling of animal life along the entire river to help determine if the removal of contaminated sediment and soil really is reducing PCB levels in fish and wildlife.

3g. River sediment removal to an average PCB level of 1 ppm at the surface and 10 ppm below 1 foot deep; residential floodplain soil removal to an average PCB level of 1.3 ppm overall; and recreational soil removal to a PCB level of 20 ppm.

This choice includes digging and removing contaminated material. Soil and sediment dug up would be disposed of at an EPA-approved landfill off-site. Sediment would be removed from the surface to a depth of up to 12 inches until the average level of the remaining PCBs is 1 ppm. Additional deeper contaminated sediment with PCB levels above 10 ppm would also be removed. Residential soil would be removed until the average level of PCBs is 1.3 ppm. Soil in the recreational floodplain areas with PCB levels above 20 ppm would be removed.

This choice also includes putting in a barrier that would prevent the erosion of flowing river water that removes and carries away sediment from the bed and banks. This choice would place a lining or barrier before backfilling excavated residential and recreational areas to prevent soil erosion.

Cost: $25.2 million

3h. River sediment removal to an average PCB level of 1 ppm at the surface and 20 ppm below 1 foot deep; residential floodplain soil removal to an average PCB level of 1.3 ppm overall; and recreational soil removal to a PCB level of 30 ppm.

This choice includes digging and removing contaminated material. Soil and sediment dug up would be disposed of at an EPA-approved landfill off-site. Sediment would be removed from the surface to a depth of up to 12 inches until the average level of the remaining PCBs is 1 ppm. Additional deeper contaminated sediment with PCB levels above 20 ppm would be removed. Residential soil would be removed until the average level of PCBs is 1.3 ppm. Soil in the recreational floodplain areas with PCB levels above 30 ppm would be removed.

This choice also includes putting in a barrier that would prevent the erosion of flowing river water that removes and carries away sediment from the bed and banks. This choice would place a lining or barrier before backfilling excavated residential and recreational areas to prevent soil erosion.

Cost: $22.7 million

Evaluating cleanup choices against the nine evaluation criteria

EPA evaluated the cleanup choices against seven of the nine evaluation criteria. (See "Explanation of the nine evaluation criteria" on Page 7.) The state and community acceptance criteria will be evaluated after public comments are received by EPA. The degree to which the cleanup choices meet the evaluation criteria, as determined by EPA, is shown in the table below.

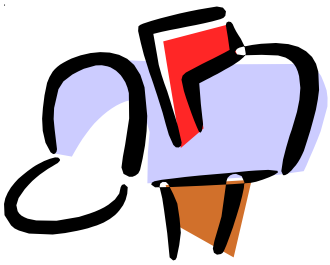
Cleanup Choices	Evaluation Criteria								
	1. Overall protection of human health and the environment	2. Compliance with applicable or relevant and appropriate requirements	3. Long-term effectiveness and permanence	4. Reduction of toxicity, mobility or volume through treatment	5. Short-term effectiveness	6. Implementability	7. Cost	8. State acceptance	9. Community acceptance
1	☐	☐	☐	☐	■	■	$305,000	Will be evaluated after the public comment period.	Will be evaluated after the public comment period.
2	❖	❖	❖	❖	❖	■	$18.4 million		
3a	■	■	❖	❖	❖	■	$16.7 million to $22.8 million		
3b	■	■	■	❖	❖	■	$54.5 million to $62.9 million		
3c	■	■	■	❖	❖	■	$34.1 million to $38.3 million		
3d	■	■	■	❖	❖	■	$34.5 million to $36.4 million		
3e	❖	❖	❖	❖	❖	■	$21 million to $22.2 million		
3f	■	■	■	❖	❖	■	$31 million		
3g	■	■	❖	❖	❖	■	$25.2 million		
3h	■	■	❖	❖	❖	■	$22.7 million		

Meets Criteria – ■ Partially Meets Criteria – ❖ Does Not Meet Criteria – ☐

Use This Space to Write Your Comments

Your input on the recommended cleanup option for the Little Mississinewa River site is important to EPA. Comments provided by the public are valuable in helping EPA select a final cleanup plan for the site.

You may use the space below to write your comments. You may hand this in at the Feb. 19, 2004 public meeting or availability session, or detach, fold and mail to Joe Muñoz. (See back page for Joe's address.) Comments must be postmarked no later than March 9, 2004. If you have any questions, please contact Joe at (312) 886-7935, or toll free at (800) 621-8431, weekdays 10 a.m. - 5:30 p.m. Comments may also be faxed to Joe at (312) 353-1155 or sent via e-mail to: muñoz.joe@epa.gov



Name_____

Affiliation_____

Address_____

City_____State_____

Zip_____

Little Mississinewa River Site Comment Sheet

Detach, fold, stamp, and mail

Name_____
Address_____
City_____State_____
Zip_____

Place
Stamp
Here

Joe Muñoz
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Explanation of the nine evaluation criteria

EPA uses the following nine criteria to evaluate the cleanup alternatives. A table comparing the alternatives against these criteria is provided on Page 4.

1. Overall Protection of Human Health and the Environment. Evaluates whether a cleanup option provides adequate protection and evaluates how risks are eliminated, reduced or controlled through treatment, engineering controls or local government controls.

2. Compliance with Applicable or Relevant and Appropriate Requirements. Evaluates whether a cleanup option meets federal and state environmental laws, regulations and other requirements or justifies any waivers.

3. Long-Term Effectiveness and Permanence. Considers any remaining risks after a cleanup is complete and the ability of a cleanup option to maintain reliable protection of human health and the environment over time once cleanup goals are met.

4. Reduction of Toxicity, Mobility, or Volume Through Treatment. Evaluates a cleanup option's use of treatment to reduce the harmful effects of the contaminants, their ability to move in the environment and the amount of contamination present.

5. Short-Term Effectiveness. Considers the time needed to clean up a site and the risks a cleanup option may pose to workers, the community and the environment until the cleanup goals are met.

6. Implementability. Is the technical and administrative feasibility of implementing a cleanup option and includes factors such as the relative availability of goods and services.

7. Cost. Includes estimated capital and annual operations and maintenance costs as well as the present worth cost. Present worth cost is the total cost of an alternative over time in terms of today's dollar value.

8. State Acceptance. Considers whether the state (in this case Indiana Department of Environmental Management) agrees with EPA's analyses and recommendations as described in the remedial investigation and feasibility study reports and EPA's proposed cleanup plan.

9. Community Acceptance. Considers whether the local community agrees with EPA's analyses and proposed cleanup plan. The comments that EPA receives on its proposal are an important indicator of community acceptance.

The next step

EPA, in consultation with Indiana Department of Environmental Management, will evaluate public comments received during the public comment period before deciding the final cleanup plan for the site. Based on new information or public comments, EPA may modify its proposed option or select another cleanup option presented in this plan or the feasibility study report. EPA encourages you to review and comment on all the cleanup options. EPA will respond to the comments in a document called a responsiveness summary. The responsiveness summary will be a part of the final decision document called the record of decision that describes the final cleanup plan selected for the site. EPA will announce the final cleanup plan in the local newspaper and will send a copy of the record of decision to the information repository for the site where it will be available for public review. (See the back page of this fact sheet for the location of the information repository.) After a final plan is chosen, it will be designed and implemented.

About the Little Mississinewa River site

The site is located in Randolph County, Ind., and consists of an approximately seven-mile segment of the Little Mississinewa River and its associated flood plain. Sediment and floodplain soil along this section of the river are contaminated with PCBs from a former Westinghouse facility and a former United Technologies Automotive Systems facility. The former Westinghouse facility on which Frank Miller Lumber Co. conducts its business, is located on Frank Miller Road, less than one-half mile west of Union City, Ind., and near the Little Mississinewa River. Westinghouse operated a small motor manufacturing plant near the site from about 1952 to 1986. Hydraulic systems used in the manufacturing process at the former Westinghouse facility used various lubricating oils, some of which contained PCBs.

The former United Technologies Automotive Systems Inc. (formally known as Sheller-Globe Corp. and now known as Lear Corp. Automotive Systems facility) is located at 1225 W. Pearl St. in Union City, Ind., and is also near the Little Mississinewa River. Hydraulic systems used in the manufacturing process at the former United Technologies facility also used various lubricating oils, some of which contained PCBs.

Some of the contamination was removed in previous actions, and in 2002, United Technologies and Westinghouse agreed to investigate the pollution and to develop a plan to clean up the remaining contamination under the oversight of EPA.

For more information

For more information about the public comment period, public meeting, proposed cleanup plan or any other aspects of the Little Mississinewa River project, please contact:

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EPA Web site

This fact sheet can be found on the following EPA Web site:

www.epa.gov/region5/sites

Click on Indiana and scroll through the list to find Little Mississinewa River.

Information repository

An information repository is a file for public review containing documents related to the project and the Superfund program. The Little Mississinewa River information repository is located in the reference section of the:

Union City Public Library
408 N. Columbia St.

Little Mississinewa River Site: EPA Proposes Cleanup Plan

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